

REMARKS

Claims 14-27 remain in this application.

The claims are amended. No new matter is entered by way of the amendments.

Applicant thanks the Examiner for the interview held September 14th and the kind suggestions made at that time.

Rejections Under 35 USC 101

Claims 14-23 and 27 were rejected under 35 USC 101 because the claims were considered hybrid claims. The Official Action references MPEP 2173.05(p)II, reproduced below:

II. PRODUCT AND PROCESS IN THE SAME CLAIM

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. *>IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, 1384, 77 USPQ2d 1140, 1145 (Fed. Cir. 2005); *<Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990) *>(< claim directed to an automatic transmission workstand and the method * of using it * held ** ambiguous and properly rejected under 35 U.S.C. 112, second paragraph>)<.*

Such claims *>may<* also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

As the Official Action correctly notes at the bottom of page 6, computer medium claims generally recite the steps of a method which the medium causes the computer to perform. The

claims have been amended consistent with this practice and thereby to avoid the basis for the section 101 rejection.

As to claim 14, the claim recites a recording medium storing a program of instructions executable by a computer to control the computer to function as an electronic editor for a calculation formula for calculating the price of a service. Please see the editor illustrated as element 4 of Figure 1. Also see published application paragraph [0044] "FIG. 1 shows an automatic electronic costing system 2 and an electronic editor 4 for calculation formulae used in calculating the price of telephone calls made by means of a telephone network 6."

The electronic editor defines said calculation formula in a format directly readable by an electronic costing system. See that editor 4 includes calculator 10 and, more precisely, editor 4 includes module 28 that "converts the tree structure entered by the user into a format which can be directly read by system 2" as per paragraph [0070]. See calculation formula 48 within electronic costing system 2.

The preamble further recites electronic costing system 2 establishing, with the aid of said calculation formula 48, the price of a service using information on the service consumed contained in consumption variables. See that system 2 includes software 76 that is "designed to pass through the tree structure 48" as per paragraph [0082].

As amended, claim 14 now recites the computer being controlled to function as the electronic editor by performing the steps of: 1) defining said calculation formula; and 2) storing the defined calculation formula in a first information storing means. See that paragraphs [0045, 0067, and 0087] discloses that the electronic calculator 10 defines/creates the calculation formula and stores the created calculation formula in an information storing means 32.

As noted in paragraph [0067], the calculator 10 is defines a formula for calculating a price stored in an electronic format which can be directly read by the system 2, by executing software for editing calculation formulae. This software 24 comprises an acquisition module 26 for a tree structure associated with a module 28 for storing this tree structure in second means 32 for storing information.

Thus, the calculation step comprises the step of interacting with a user to create (by acquisition module 26) a tree structure (Figure 3) defining the calculation formula. See paragraph [0016-0025].

With reference to Figure 3 and paragraphs [0041-0042], there is disclosed a tree structure showing a calculation formula defined by the inventive editor. A tree structure is defined as being a structure formed by nodes connected to one another by arcs. In this structure, with the exception of the root node, each node is connected on the left side to a single father node.

On the right side, each node is connected to either nothing, to a single child node or a plurality of child nodes. A node is said to be an `ending node` when it is connected on the left side to a single father node with no child node on the right side. An ending node therefore forms the end of a branch of the tree structure.

With reference to Figure 3 and paragraph [0047], the pre-stored nodes are each associated with a pre-defined parameterisable operation. Each of these parameterisable operations, once the parameters have been defined, corresponds to an operation designed to be executed by the system 2, when the corresponding node is activated.

With reference to paragraph [0082], the software 76 executes each operation associated with an activated node, the software 76 passes through the tree structure 48 gradually executing the operations associated with the nodes as they are activated. Paragraphs [0114-0118] disclose the automatic costing software 76 passes through the tree structure of the calculation formula starting from the node 90 toward the endings, successively carrying out each of the operations associated with the activated nodes, e.g., 1) to calculate the duration of the call from variables V1 and V2, and to store this duration in the variable V5, and then 2) to calculate the price of the telephone call. The software 76 knows what operations to execute in each

node and what are the child nodes because this information is recorded in tree structure 48 (see paragraphs [0070-0073]).

Claim 14 concludes with a wherein clause that recites the storing step comprising the steps of i) automatically converting the created tree structure into a format directly readable by the electronic costing system and ii) storing the converted tree structure 48 in the information storing means 32.

This is disclosed at least by paragraphs [0070-0073], the storage module 28 transfers automatically the tree structure created with module 26 into a tree structure 48 stored in the storing information means 32, the tree structure 48 in a readable format without further human intervention by the system 2. It is disclosed that during step 88, the module 28 automatically converts the tree structure entered by the user into a format which can be directly read by the system 2 and stores the tree structure thus converted in the means 32 for storing information. For example, the created tree structure is transformed automatically into JAVA code from Sun Microsystems, in which each node corresponds to an object having as its attribute: a pointer toward the father node, a pointer toward the child node and a feature containing the parametered operation to be executed.

As to claim 15, consistent with paragraph [0069], the amended claim recites wherein said program of instructions comprises a module 34 executable by the computer to control the

to further function as the electronic editor by performing the further step of displaying the tree structure during said step of creating the tree structure.

As to claim 16, consistent with paragraphs [0050] and [0096], the amended claim recites said step of creating said tree structure comprises sub-step of creating, under the control of a user, a first-level node 92, 94 in said tree structure solely associated with an operation for activating child nodes of said first-level node in response to receiving a new value for one of the consumption variables processed by a calculation operation associated with one of the child nodes.

Claim 17 is similarly amended and finds support in paragraphs [0051] and [0109].

Claim 18 refers to a processing node 102 and finds support in paragraphs [0052], [0058-0059], and [0101].

Claim 19 refers to a decision node 104 and finds support in paragraphs [0053], [0061-0062], and [0102].

Claim 20 refers to a split node 114, 116 and finds support in paragraphs [0063-0064] and [0106].

Claim 21 refers to a node 100 and finds support in paragraphs [0056] and [0100].

Claim 22 refers to a ending (112, 118, 120, ...) in the tree structure and finds support in paragraphs [0054], [0104], and [0107].

Claim 23 has been amended to detail the step of creating said tree structure as comprising sub-steps of i) accessing a second information storing means containing a library of pre-stored nodes associated respectively with pre-defined parameterisable operations, ii) selecting nodes contained in the library, iii) connecting the selected nodes to a father node and iv) parametering the parameterisable operations associated with the nodes of said tree structure. See the disclosure that the editor 4 comprises information storing means 12 containing a library 16 of pre-stored nodes associated respectively with pre-defined parameterisable operations (paragraphs [0045-0047]) and the acquisition module 26 comprises a sub-module 40 for selecting nodes contained in the library, a sub-module 42 for connecting nodes selected with the aid of the selection sub-module to a father node and a sub-module 44 for parametering the parameterisable operations associated with the nodes of the library (paragraphs [0068-0069], [0090]).

These claims do not claim software *per se*. Rather, the claims are directed to a recording medium storing a program of instructions executable by a computer to control the computer to function as an electronic editor. The claims recite steps the computer performs (resulting from the program of instructions being executed by the computer) such that the computer functions as the electronic editor.

Accordingly, the requirements under section 101 are believed to be satisfied. Withdrawal of this rejection is solicited.

Rejections Under 35 USC 112

Claim 14 was rejected under 35 USC 112, second paragraph as indefinite.

The root of this rejection was the term "acquires" which has been amended to clarify that the defining step comprises a step of interacting with a user to create a tree structure defining the calculation formula, part of the computer functioning as the electronic editor.

This amendment is believed to overcome the indefiniteness rejection.

Claims 16-22 recite the creation of nodes of which the tree structure is comprised, this creation being by the computer functioning as the electronic editor in creating the nodes under the control of the user. The term "control" is used in the specification and is believe definite in that one of skill would understand that the computer readable medium causes the computer to function as an electronic editor while interacting with the user. The claims are not conditioned on the user taking some action, i.e., "if the user does nothing, then none of claims 16-22 occur" is incorrect as the claims require the user to control the editor to direct the recited step.

Claims 16-22 have been clarified to recite that these claims are directed to sub-steps of the steps recited in claim 14 and as such are part of the tree structure creation recited in claim 14.

Claim 23 has been amended to remedy the stated basis of rejection and to recite specific steps taken by the electronic editor.

Claim 24 is directed to the invention, as embodied in an electronic costing system 2 for automatically establishing (costing) the price of a service (e.g., a telephone calls, [0044]) using a calculation formula.

The recited system comprises a receiver 70, a storage element 32, and an electronic calculating unit 72.

As per paragraph [0080], the receiver 70 stores consumption variables containing information on consumption of the service.

The storage element 32 (paragraph [0079]) contains a tree structure (48) defining a calculation formula for automatically establishing the price of the service, the formula for calculating the price of the service using the information on consumption of the service stored by the receiver (70).

The tree structure is recited as being formed by nodes and endings. The nodes are connected to one another by arcs, each node being associated with a pricing calculating operation to establish the price of the service, the arcs defining, by an

ordered relationship, an order in which said operations are carried out. See paragraphs [0082] and [0114-0118] disclosing that software 76 knows what operations to execute in each node and what are the child nodes because this information is recorded in tree structure 48 (refer to paragraphs [0070-0073]).

As disclosed by paragraphs [0079] and [0081-0082], the electronic calculating unit (72, 76) is configured for executing operations associated with the nodes and endings of the tree structure, in response to information received by the receiver, so as to pass through the tree structure of the calculation formula from the root node to at least one of the endings by successively executing the conditional activation operation of father nodes, then solely the conditional activation operations associated with the activated child nodes until at least one ending associated with a price-calculating operation to has been activated and to execute the at least one ending to establish automatically the price of the service.

As amended, claim 24 is believed to remedy the stated basis of rejection.

Claim 25 has been amended to recite a method creating a formula for calculating, on a computer, the price of a service in a directly readable format by an electronic costing system 2. The electronic costing system, with the aid of said formula, establishing the price of a service (e.g., phone calls) from information on consumption of the service, said information

contained in consumption variables. The remaining recitations correspond to features discussed above.

As noted by the Official Action, page 10, paragraph 19, claim 26 recites claims steps (sub-steps) defining the acquisition step recited in claim 25.

With reference to Figure 2 and paragraphs {0088-0092}, the acquisition step is disclosed as comprising i) a sub-step (85) of selecting a node in a library of pre-stored nodes, ii) a sub-step (86) of connecting the selected node during the selection sub-step to a father node, and iii) a sub-step (87) of parametering the operation of the node connected to the father node during the connection sub-step.

Claim 26 further defines the previously recited creating step of claim 25. This claim is believed to be definite within the meaning of the statute.

In view of the above, the claims have been amended to conform the section 112, 2nd paragraph. Withdrawal of the rejection is solicited.

Rejections Under 35 USC 103

Claims 14-23 and 27 stand rejected as obvious over Tiefenbrun in view of Dunn and further in view of Feather.

Claims 24-25 stand rejected as obvious over Dunn and Feather. Claim 26 is rejected in further view of Tiefenbrun.

Claims 14, 24, and 25 are independent.

Applicant submits that none of the references teach or suggest defining a calculation formula by creating a tree structure that defines the calculation formula, where, more particularly, each node is associated with a pricing calculating operation and the arcs define an order in which said pricing calculating operations are carried out.

Tiefenbrun discloses an editor of a tree structure used to classify files (paragraph [0002]). The Tiefenbrun concerns establishing a tree structure in which each lower node (lower folder) applies a filter and display only those objects (files) that were contained in the higher node that have an attribute value that matches the node's attribute value (paragraph [0016]).

On page 11 of the Official Action, the Examiner acknowledges that Tiefenbrun does not disclose the recited steps of creating the recited tree structure that defines the calculation formula, or the recited step of converting the created tree structure into a format directly readable by the electronic costing system.

Dunn

Dunn is offered for disclosing a tree structure calculation formula.

Dunn fairly discloses calculating parameters for an e-commerce system where the calculation of the parameters (like charge reductions, shipping charge, ...) for a catalog item from the catalog item itself to facilitate the changing of the

calculation of those parameters and adding new calculations for new parameters.

Dunn teaches each catalog item is associated with a calculation code and each calculation code is associated with a calculation rule, e.g., a 10% discount. The rule is used to calculate the catalog item final price. Many rules may be associated to the same item (for example, a discount rule and a shipping rule).

Dunn only discloses a method to select which calculation codes and calculation rules are associated with a specific item. If plural rules are selected, a sequence attribute 304 is used to determine the order in which the rules are used to calculate the final price.

Dunn does not, however, disclose defining a tree structure that defines the calculation formula, the tree structure being as recited, each node associated with a pricing calculating operation and the arcs defining an order in which the pricing calculating operations are carried out.

Rather, Dunn teaches away from the claimed invention in that Dunn teaches to use the sequence attribute 304 to order the pricing calculating operations.

Feather

Feather is offered for teaching automatically converting the created tree structure into a format directly readable by the electronic costing system.

Feather teaches the conversion of a database type program originated for a first system for use in a second system. The database is not a tree structure with nodes and arcs as recited. Thus, there is no teaching of converting a tree structure as required by the claims.

Claims 24-25

These claims are rejected over Dunn and Feather.

As discussed above, none of the references teach the recited tree structure in which the arcs define the order in which the operations associated with the nodes are to be carried out by the electronic costing system.

Consequently, the obviousness rejection fails.

Further, Dunn fails to disclose a calculating unit successively executing conditional activation operations of the father nodes, then, solely conditional activation operations associated with activated child nodes until at least one ending associated with a price-calculating operation has been activated, and then to execute the at least one ending to automatically establish the price of the service.

Thus, these claims are also non-obvious.

The dependent claims are allowable at least for depending from an allowable claim.

Therefore, reconsideration and allowance of all the claims are respectfully requested.

This response is believed to be fully responsive and to put the case in condition for allowance. Entry of the amendment; and an early and favorable action on the merits is earnestly requested. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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